

Amendments to the Specification:

Please replace the paragraph beginning at page 2, line 29, with the following redlined paragraph:

Such modulator according to an exemplary embodiment of the present invention ~~as set forth in claim 1~~ allows the use of a linear power amplifier in the digital I/Q modulator supporting multi time slot operation of wireless TDMA transmitters. In other words, the difficulties, which are encountered in a linear transmitter for EGPRS, may be overcome by introducing dips in the envelope of the digital or I/Q signal during the guard interval between adjacent time slots. Furthermore, the introduction of dips in the envelope of the digital or I/Q signal may have the effect that unwanted abrupt switching transients in the TX signal due to abrupt switching of the gain of the TX path can be avoided. This can be done by switching the gain of the TX path during the dip in the I/Q signal when the TX signal is down. Accordingly, interference between adjacent channels occurring with a change of the TX power level between adjacent time slots is minimized.

Please replace the eight paragraphs beginning at page 3, line 19, with the following eight redlined paragraphs:

According to another exemplary embodiment of the present invention ~~as set forth in claim 2~~, both, the I and the Q signal are multiplied with a dip-shaped waveform which allows for a very simple solution for introducing the dips.

According to an exemplary embodiment of the present invention ~~as set forth in claim 3~~, the dip shaping is for free because the pulse shaping filter is usually provided for 8PSK.

According to an exemplary embodiment of the present invention ~~as set forth in claim 4~~, zeros are filled into the pulse shaping filter during the guard interval. By filling zeros into the pulse-shaping filter during the guard interval, the dip is introduced in the envelope of the

digital I/Q signal. Since the generation of digital zeros is simple and not prone to malfunctions, a very simple and stable modulator avoiding interference between adjacent channels is provided.

Yet another exemplary embodiment of the present invention, ~~as set forth in claim 5~~, allows for the efficient introduction of the dips into the envelope when GMSK modulated time-slots are involved. Furthermore, the exemplary embodiment of the present invention ~~as set forth in claim 5~~, allows for a re-use of a C0 filter for the GMSK instead of an independent GMSK modulator.

According to another exemplary embodiment of the present invention, ~~as set forth in claim 6~~, the modulator is a GMSK modulator and a 8PSK modulator and allows to use both modulations schemes, the GMSK modulation scheme and the 8PSK modulation scheme.

According to yet another exemplary embodiment of the present invention ~~as set forth in claim 7~~, a signal processing method is provided, which minimizes interference in adjacent channels.

According to yet other exemplary embodiments of the present invention ~~as set forth in claims 8 and 9~~, signal processing methods are provided, wherein the dips are generated by a multiplication of the I signal and the Q signal with dip-shaped waveforms and by means of the pulse shaping filter. Both methods allow a very simple and efficient control of the modulation. Also, if the dip is introduced by means of the pulse shaping filter, the dip shaping is for free.

According to the present invention, there is also provided a computer program for a TDMA transmitter for a GSM-, EDGE- or EGPRS-system ~~as set forth in claim 10~~.